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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,073	03/11/2004	Chul Ho Ham	MRE-0070	4384

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EXAMINER

SEFER, AHMED N

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,073

Applicant(s)

HAM ET AL.

Examiner

A. Sefer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

1. The amendment filed May 24, 2005 has been entered and new claims 7-20 have been added.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 6, 8, 10, 11, 15 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The application as originally filed does not specifically support the claim limitation "... is configured to hold the semiconductor device with a vacuum" as recited in claim 6.

The application as originally filed does not specifically support the claim limitation "... an annular pusher formed around ... from the first elastic member" as recited in claim 8.

The application as originally filed does not specifically support the claim limitation "the vacuum tube and the through hole are configured to keep a vacuum when mated" as recited in claim 10.

The application as originally filed does not specifically support the claim limitation "an O-ring is fitted to ..., to thereby keep a vacuum" as recited in claim 11.

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The application as originally filed does not specifically support the claim limitation “a telescoping housing having a first internal vacuum conduit; and ... a second internal vacuum conduit having first and second end, wherein ... are configured to hold a semiconductor device” as recited in claim 15.

The application as originally filed does not specifically support the claim limitation “wherein the presence of the semiconductor device on the second end of the second internal conduit is determined by the presence of a vacuum formed in the first and second internal conduits” as recited in claim 20.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (“Lee”) US PG-Pub 2004/0251460.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Lee discloses in figs. 4-9 a carrier module comprising: a carrier module body 500 for seating a semiconductor device on an underside thereof, having a pass through hole 512 from an upper part to the underside the semiconductor device S is seated thereon; a housing 501 over the carrier module body; a supplementary housing 510 fitted in a lower part of the housing to be movable in up/down directions, for elastic contact with the carrier module body by a first elastic member 27 fitted inside of the housing; a vacuum tube (lower portion of item 512) in the supplementary housing so as to be in communication with the pass through hole in the carrier module body; at least one pair of latches 521 in a lower part of the carrier module body to move apart or close in an outer or inner side, for holding or releasing the semiconductor device seated on the carrier module body; at least one latch button 524 fitted in an upper part of the carrier module body so as to be movable in up/down directions, and coupled to the at least one pair of latches with a connection pin 523 for moving in up/down directions by an external force, to move the at least one pair of latches; and a second elastic member for elastic supporting of the latch buttons on the carrier module body (par. 0032), thereby, when the semiconductor device is brought into contact with the test socket, and tested, the semiconductor device is held with a vacuum tube formed through the pass through hole in the carrier module body and the vacuum tube while the at least one pair of latches latch releases the semiconductor device (pars. 0038 and 0041).

Regarding claim 2, Lee discloses a heat sink in a central part of the carrier module body, for being brought into contact with a surface of the semiconductor device, and for transferring heat (pars. 0005 and 0009).

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Regarding claim 3, Lee discloses an O-ring (upper portion of element 200) being fitted at a connection part of the supplementary housing and the carrier module body.

Regarding claim 4, Lee discloses a latch having a slanted slot of a long hole 526 form for inserting a guide pin 525 therein, wherein the latch is opened or closed, as the slanted slot slides along the guide pin.

Regarding claim 5, Lee discloses a projection 522 projected outwardly from an outer part of each latch, wherein the projection is configured to be brought in contact with a latch pusher (pars. 0037 and 0051) on the test socket to thereby open each latch.

6. Claims 6-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee.

Lee discloses in figs. 4-9 a carrier module comprising a housing 501 having an internal accommodating space; supplemental housing 510 that is partially accommodated in the internal accommodating space of the housing and having a vacuum tube; and a carrier module body having a latch and a through hole 512, wherein one end of the through hole seats a semiconductor device S and is configured to hold the semiconductor device with a vacuum (lower portion of item 512), and the other end of the through hole is aligned and communicates with the vacuum tube.

Regarding claim 7, Lee discloses a first elastic member 27 being further accommodated in the internal accommodating space of the housing and elastically supports the supplemental housing.

Regarding claim 8, as understood, Lee discloses an annular pusher 530 formed around the supplementary housing for receiving support from the first elastic member.

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Regarding claim 9, as understood, Lee discloses an annular projection 522 for seating the annular pusher of the supplemental housing.

Regarding claim 10, as understood, Lee discloses the vacuum tube and the through hole are configured to keep a vacuum when mated.

Regarding claim 11, as understood, Lee discloses an O-ring (upper portion of element 200) being fitted to one of an end of the vacuum tube and an end of the through hole, to thereby keep the vacuum.

Regarding claim 12 Lee discloses an O-ring (upper portion of element 200) being fitted to one of an end of the vacuum tube.

Regarding claims 13 and 14, Lee discloses (pars. 0005 and 0009) a heat sink for at least one of heating a semiconductor device seated on the carrier module; and the through hole being formed the heat sink (as in claim 14).

7. Claims 15-20, as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Lee.

Lee discloses in figs. 4-9 a telescoping housing having a first internal vacuum conduit (lower portion of item 512); and a carrier module having a latch 521 and a second internal vacuum conduit 512 having a first and a second end, wherein the first internal vacuum conduit is in vacuum communication with the first end of the second internal conduit, and wherein both the latch and the second end of the second internal conduit are configured to hold a semiconductor device S.

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Regarding claim 16, Lee discloses the first internal vacuum conduit of the telescoping housing and the second internal vacuum conduit of the carrier module are fitted to form a continuous vacuum conduit.

Regarding claim 17, Lee discloses (figs. 4-9 and pars. 0005 and 0009) the second vacuum conduit is formed by a heat sink formed through the carrier module, and a first end of the heat sink contacts the first vacuum conduit and a second end of the heat sink is configured to contact a semiconductor device.

Regarding claim 18, Lee discloses a latch button 524 which is slidably fitted to the carrier module; and a guide pin 525 fixed to the carrier module, wherein the latch further comprises an elongated slanted hole 526 that accommodates the guide pin and pivots about a connection pin 523 attached to the latch button, so that when the latch button is moved, the latch pivots about the connection pin while the guide pin guides the movement of the slanted hole to open the latch.

Regarding claim 19, Lee discloses a projection 522 for contact with a latch pusher of a test socket (pars. 0037 and 0051).

Regarding claim 20, Lee discloses wherein the presence of the semiconductor device on the second end of the second internal conduit is determined by the presence of a vacuum formed in the first and second internal conduits.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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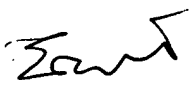
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANS
July 29, 2005


EVAN PERT
PRIMARY EXAMINER